

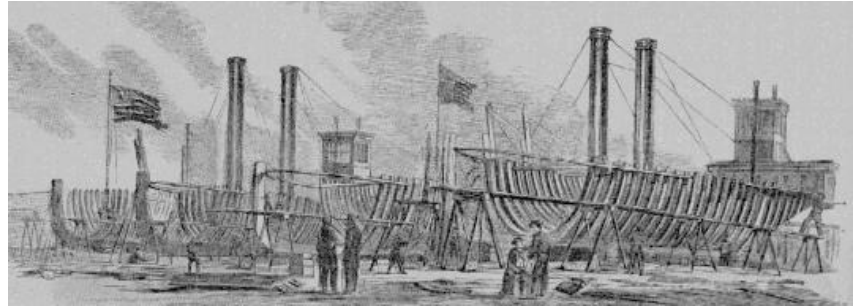
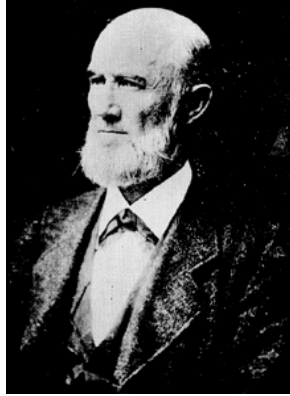
Vicksburg

National Park Service
U.S. Department of the Interior

Vicksburg National Military Park



James Buchanan Eads 1820-1887



Eads' shipyard at Carondelet, Missouri constructing federal gunboats. Source: Harper's Weekly, Oct 5, 1861. Sketch by Alexander Simplot.

An Engineer for the Ages

Mark Twain wrote, "*Ten thousand River Commissions cannot tame that lawless stream,*" but James B. Eads came close to mastering "*Old Man River.*" Born in 1820 in Lawrenceburg, Indiana, James Buchanan Eads became one of the great self-taught engineers of the nineteenth century.

To Tame "Old Man River"

As a young boy living in St. Louis, James had to quit school and sell apples in the street to help his struggling family. After he was hired as a clerk for a dry goods business, he educated himself from the owner's private library.

His fascination with the "*Mighty Mississippi*" began at age eighteen when he became a purser's clerk on a Mississippi River steamboat. A budding entrepreneur, Eads soon went into business salvaging vessels wrecked by underwater snags in the muddy Mississippi. To do this, he invented a diving bell that allowed him to walk the sifting river bottom and guide the snag boats to their targets. Within a few years, he had made himself rich and had acquired a formidable knowledge of hydraulics.

When the Civil War began, Eads was summoned from semi-retirement in St. Louis to offer the U.S. Government advice on how to wrest control of the Lower Mississippi River from the Confederacy. Eads proposed building seven armor-plated, shallow-draft gunboats to help Union land forces overpower Confederate forts impeding their progress downriver. Eads accomplished this monumental task in less than one hundred days. The *Cairo*, *Carondelet*, *Cincinnati*, *Louisville*, *Mound City*, *Pittsburg*, and *St. Louis*, collectively known as City Class Ironclads, were commissioned and in service on the western waters by January 1862. These gunboats were the first ironclads built in the United States and played an integral role in winning the "*Mighty Mississippi*" for the Union and thus cutting the Confederacy in two.

Not to be outdone, Eads also designed a complex steam-driven turret used on river monitors during the war that rivaled John Ericsson's celebrated model. Two of these monitors, the *Chickasaw* and *Winnebago*, made history as part of David "Damn the torpedoes!" Farragut's fleet when he entered Mobile Bay in 1864.

Soon after the war ended, Eads set out to accomplish another amazing feat: the building of the first bridge across the Mississippi River at St. Louis. Due to specifications that the span be at least 50 feet above the surface for smokestack clearance, and the central span had to be 500 feet long, learned engineers pronounced the job impossible. Undaunted, Eads spent the next seven years building the engineering marvel. When it opened in 1874, the bridge was one of the man-made wonders of America. The structure still stands in St. Louis as a testament to Eads' remarkable talent.

Eads then embarked upon another memorable project. This time he was asked to devise a way to open one of the three sluggish streams which formed the terminus of the Mississippi River for the benefit of New Orleans merchants. To create a 30-foot-deep ship channel through South Pass, Eads proposed building twin jetties that would force the river to dig its own channel by speeding the flow of water. The project took five years and was completed in 1879. Precisely as Eads had predicted, the current scoured its own bottom, pushing the silt far out into the deep Gulf waters. Eads had succeeded once again in taming "*Old Man River.*"

After completing the jetties, Eads traveled widely and was regularly consulted by governments pondering water transportation problems. His last project was to build a "*ship railroad*" across southern Mexico that would conceivably cut thousands of miles off the trip between the eastern and western coasts of the United States. This project, however, was never realized. The father of the Eads gunboats, bridge, and jetties died in Nassau, Bahamas in 1887 at the age of sixty-six years.



Eads Bridge, St. Louis